



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,929	07/09/2001	Takaaki Murata	02887.0144-01	7152

22852 7590 06/26/2003

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

TRAN, THAO T

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,929

Applicant(s)

MURATA ET AL.

Examiner

Thao T. Tran

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-22 and 36-44 is/are pending in the application.
- 4a) Of the above claim(s) 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/377,485.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendments received on June 13, 2003. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
2. Claims 20-22 and 36-44 are currently pending in this application. Claims 20-22 have been withdrawn as non-elected invention in Paper No. 6.

Specification

3. In view of the Office Action of March 12, 2003, the objection to the specification has been withdrawn in view of further consideration.

Claim Objections

4. In view of the Office Action of March 12, 2003, the objection of claims 39 and 44 has been withdrawn due to the Amendments made thereto.

Claim Rejections - 35 USC § 112

5. In view of the Office Action of March 12, 2003, the rejection of claims 36-41 has been withdrawn due to further consideration.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 36, 38-40, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyagawa et al. (US Pat. 4,626,876).

In regards to claims 36 and 39-40, Miyagawa teaches an ozonizing unit (ozone generator) comprising an electrode plate, the electrode plate including a dielectric substrate 1, a hot electrode and a stray electrode 2 and 3 (floating electrodes) formed on one surface of the dielectric substrate; and a back electrode 5 formed on the other surface of the dielectric substrate (see Fig. 4-10; col. 3, ln. 64 to col. 4, ln. 14). Miyagawa further teaches the electrodes, each having linear electrode elements 2, 2', 3, 3', and 5 (see Fig. 12); the linear elements of the stray electrode are interposed between those of the hot electrode.

In regards to claim 44, the additional electrode could be interpreted as one of the floating electrodes or the back electrode in claim 36.

In regards to claim 38, Miyagawa teaches the hot and stray electrodes being covered by a dielectric (see Figs. 5-6, 8-10).

Note: With respect to the limitation “so that a voltage is applied across the hot electrode and the back electrode (or additional electrode) to produce surface discharge on one surface of the dielectric substrate” in claims 36, 42, and 44, Miyagawa does teach a surface discharge produced on the surface of the dielectric substrate when a voltage is

Art Unit: 1711

applied across the electrodes (see Figs. 1-3). Moreover, apparatus claims must be distinguished from the prior art in terms of structure rather than function. See *MPEP* 2114.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 37 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyagawa as applied to claim 36 above.

Miyagawa is as set forth in claim 36 above and incorporated herein.

In regards to claim 37, Miyagawa teaches the back electrode covering a major part of the surface of the dielectric (see Fig. 7).

Although Miyagawa does not teach the back electrode covering the whole surface of the dielectric, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified Miyagawa's back electrode so that the electrode would cover the whole surface of the dielectric, because it appears that whether the back electrode covers the whole surface of a major part of the surface of the dielectric would not have significantly changed the operation of the ozonizing unit. See *In re Kuhle*, 188 USPQ 7 (CCPA 1975); *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

Art Unit: 1711

In regards to claim 41, although Miyagawa does not teach the dielectric substrate being circular, the hot and stray electrode elements being concentric circles or a pattern of spiral; it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the shapes of the dielectric and the electrode elements would have been an obvious design choice, since Applicant has not disclose that those particular configurations would improve the process or is of any particular purpose. See In re Dailey, 149 USPQ 47 (CCPA 1966); In re Kuhle 188 USPQ (CCPA 1975).

In regards to claims 42-43, Miyagawa teaches an ozonizing unit (ozone generator) comprising an electrode plate, the electrode plate including a dielectric substrate 1, a hot electrode and a stray electrode 2 and 3 formed on one surface of the dielectric substrate; and a back electrode 5 formed on the other surface of the dielectric substrate (see Fig. 4-10; col. 3, ln. 64 to col. 4, ln. 14). Miyagawa further teaches the electrodes, each having linear electrode elements 2, 2', 3, 3', and 5 (see Fig. 12).

Although Miyagawa teaches the linear elements of the back electrode being parallel to, instead of intersecting, the hot and stray electrode elements; it has been held mere rearrangement of parts an obvious matter of design choice and, therefore, unpatentable, because rearrangement the position of the electrode elements with respect to each other would depend upon operating conditions and user's preference and intended use. See In re Kuhle, 188 USPQ 7 (CCPA 1975); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

Art Unit: 1711

Response to Arguments

10. Applicant's arguments filed on June 13, 2003 have been fully considered but they are not persuasive.

Applicants allege that Miyagawa does not disclose a voltage being applied across the hot electrode and the back electrode or the additional electrode to produce surface discharge on one surface of the dielectric substrate (pages 7-8). However, Miyagawa does teach a surface discharge on one surface of the dielectric substrate as illustrated in Figures 1-3. Therefore, Miyagawa does teach the presently claimed invention.

Moreover, as mentioned in paragraph 7 above, apparatus claims must be distinguished from the prior art in terms of structure rather than function. See *MPEP* 2114.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See *MPEP* § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 1711

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

tt

tt

June 20, 2003



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700